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ABSTRACT

The Philadelphia School System developed a multilevel Management Information Feedback System to monitor the operation of the reading programs of its eight subdistricts. The major steps involved in the developmental process were: (1) the determination of what information was needed; (2) the development of noninterruptive information collection procedures; (3) the design of useful display formats; (4) the writing of the required computer programs; and (5) the development of cooperative working relationships with all project personnel. District resources were coordinated and a system was developed which employed the district's inhouse computer facilities to generate information useful at the classroom, school, and district administrative levels. The project was substantially completed on time. Analysis of the system's output indicated that it produced global information which was useful for management purposes but which was not sufficiently individualized and skill-specific to be useful to the teachers at the classroom instructional level. Improvements were undertaken to remedy this problem. (PB)

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THE DEVELOPMENT AND IMPLEMENTATION OF A MULTI-LEVEL MANAGEMENT INFORMATION FEEDBACK SYSTEM

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The Development and Implementation of a Multi-Level Management Information Feedback System

- - Irvin J. Farber

The impetus for our work with an information feedback system was The School District of Philadelphia's intensive effort to improve the reading skills of its students. Each of the school system's eight administrative sub-districts was given the mandate to develop reading programs appropriate for its respective student populations. As may be expected, a wide range of programs emerged. This was influenced by the needs of the student populations served, the orientations of the professional staffs involved, and, in some cases, the success of publishers' representatives in sounding like they had discovered the "philospher's stone."

This, in brief, was the situation that faced us. Our responsibility was to evaluate the progress of the reading program or, rather, programs. The immediate responsibility was given to the Research Associate assigned to each district office, and the effort was coordinated centrally by the Research Office. Administrative sub-districts range in size from about 17,000 students to about 35,000 students each, and there are approximately 35 schools in each district.

The main constraints which we faced in developing the feedback system included:

1. a minimal collection effort had to produce information for three levels of decision-makers: classroom, school, and upper administration.
2. information produced had to be directly usable by project personnel.
3. disruption of the instructional process had to be minimal.

4. allowance had to be made within a single system for a variety of programs among administrative sub-districts.
5. information had to be available when decisions were to be made.
6. maximum use had to be made of computer facilities so that teacher involvement would be minimal.
7. the entire job had to be accomplished on inhouse facilities (initially a Digitek 100 and an IBM 360-40, and currently an NCS Sentry 70 and an IBM 370-145).

The major steps to be accomplished in the development of the system were:

1. determining what information was needed (i.e., who needed what? When? And for what purpose?)
2. developing an information collection procedure that would involve minimal classroom interference.
3. designing display formats that would report information in a useful, easily understandable manner.
4. writing the necessary computer programs to process and display the information.
5. developing a cooperative relationship with project personnel that would assure the utilization of the information and a free flowback of reaction to it.

While the steps listed appear to be routine and straightforward, it is submitted that the final point is the critical element too often missing. It is really the interactive relationship between the evaluator and project personnel that transforms the evaluation process from an academic exercise to a process of improving the educational effort.

The details of how each step of the system was approached will be discussed in the subsequent papers in this symposium.

The coordination of this effort involved bringing together the various resources of the school system to produce the final products. In brief, data collection, transportation, scanning, data processing (i.e., report production), and report distribution had to be coordinated so that each element was where it was supposed to be, when it was supposed to be there, and its arrival was expected. In addition, the activities of seven administrative sub-districts had to be intermeshed so that they didn't bump into each other. This had to be accomplished three times during the school year.

Appendix A is a copy of the schedule for one month. The numbers refer to the administrative sub-districts. I cannot report that all deadlines were achieved. I can, however, testify to the fact that Edsel Murphy's law works beautifully! Still, before the end of the year the anticipated turnaround was being achieved.

With all of this planning and forethought one might imagine that we had "arrived." As one commercial has it: even your best friends won't tell you. Well, teachers will! They found the information produced less than useful. If nothing else, it was too global. The question addressed by our reports was: what is the status of class X as of time Y? The question being asked by the teachers was: what shall I do with Johnny tomorrow morning? The indication was that our reports were more useful for management purposes than for instructional purposes.

Teachers required information about specific skills to which they could address their instructional programs. This meant that instruments had to be

developed to measure these skills and the procedures outlined above repeated, but with one additional constraint. Classroom data becomes stale very quickly. We had to gear up for eventual overnight turnaround.

This, then, is the outline of our system addressed to each level or decision-maker in the school system. My colleagues will describe how each step was approached.

I would like to add one last footnote: since we submitted the outline for this symposium, a decision has been made to undertake some major changes in our system. It will be expanded to another curriculum area, and it will attempt to reduce the amount of teacher involvement by making better use of the capabilities of our new scanning system.

One might reasonably ask whether we are ready to share our experiences if our system is not finished. It has been our experience that a system begins to become obsolete as soon as it is "finished." At this point I'm not sure that it will be any more "finished" ten years from now. The critical need is to be flexible enough to change and secure enough to listen when you are rather pointedly told that you need to do so.

JAN

1972

SUNDAY	MONDAY	TUESDAY
	APPENDIX A-1	
2 002	3 003 7-Plan labels	4 004
9 009	10 010 4-Plan labels 3-Pick up forms	11 011 3-Process forms
16 016	17 017 7-Pick up forms 2-Test labels 2-Plan board 1-Plan labels 3- Report program 3- Print report	18 018 7-Process forms 3-Decollate 3-Deliver reports
23 023	24 024 4-Process forms 7- Report program 7- Print report	25 025 4-Process forms 4- Cards to tape 4- Sort by I.D. 7-Decollate 7-Deliver report 2-Pick up forms
30 030	31 031 2- Validation program 2- Sort by location 2-Return forms	

WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	APPENDIX A-II		1 New Year's Day 001
5 005	6 006 7-Test labels 7-Plan board	7 007	8 008
12 012 4-Test labels 4-Plan board 3-Process forms	13 013 2-Plan labels 3-Process forms 3-Cards to tape 3-Sort by I.D.	14 014 3-Validation program 3-Sort by location 3-Return forms	15 015
19 019 7-Process forms 1-Test labels	20 020 7-Process forms 1-Plan board 7-Cards to tape 7-Sort by I.D. 4-Pick up forms	21 021 7-Return forms 7-Validation program 7-Sort by location 4-Process forms	22 022
26 026 4-Return forms 4-Validation program 4-Sort by I.D. 2-Process forms	27 027 4-Report program 4-Print report 2-Process forms	28 028 4-Decollate 4-Deliver report 2-Process forms 2-Cards to tape 2-Sort by I.D.	29 029

Notes Numbers include district.